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ABSTRACT

Examined were preschoolers' naturally occurring behaviors during their attempts to gain, maintain, and regain materials, space, and peers' attention/interaction in the classroom. The major question addressed was, Are there differences between "most" and "least" competent preschoolers in terms of (1) frequency and type of problem involvement, and (2) the number and type of strategies used to resolve problems? Subjects were 28 children attending one of four Head Start classrooms in two geographical locations. Teachers rated children's social behavior on two instruments: Kohn's Social Competence Scale (KCS) and the Hahnemann Preschool Behavior Rating Scale (HPBS). (The KCS measures interest/participation and cooperation/compliance, while the HPBS measures emotionality, impatience, and aggression.) The 14 least competent children were those who ranked lowest on cooperation/compliance and highest on all three factors of the HPBS. The 14 most competent children were those who ranked highest on both factors of the KCS and average on aggression and impatience. Using a focal child/time-sampling procedure, children were observed for fifty 1-minute intervals. A total of 16 strategies for solving problems and 4 general categories of behavior not related to problems were observed; additionally, a written record was made of several dimensions of observed behaviors. Results indicated differences in strategies most and least competent preschoolers used to solve interpersonal problems. (RH)

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QUANTITY OR QUALITY OF STRATEGIES:

WHICH INDICATES COMPETENCY IN SOCIAL PROBLEM-SOLVING?

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Quantity or Quality of Strategies: Which Indicates Competency in Social Problem-Solving?

Previous research on preschoolers' social problem-solving skills has assessed children's skills predominantly with hypothetical-reflective measures. The conclusion from this research is that the competent social problem-solver is one who can generate a large number of strategies to solve interpersonal problems (Spivak and Shure, 1974). Recent investigations, however, have questioned the internal and external validity of these measures and their results (see Butler and Meichenbaum, 1980 and Krasnor and Rubin, 1981 for reviews). Furthermore, Asher, Markell and Hymel (1981) indicate the need for a qualitative, as opposed to a quantitative, focus in social skills research.

The present study examined preschoolers' naturally-occurring behavior during their attempts to gain, maintain, and regain materials, space, and peers' attention/interaction in the classroom. Two major questions were examined: are there differences between the "most" and the "least" competent preschoolers in terms of (1) the frequency and type of problem involvement and (2) the number and type of strategies used to resolve problems?

Methods

Sample

Twenty-eight children (11 girls, 17 boys, M = 51 mos.), 14 "most" competent and 14 "least" competent, were selected from four Head Start classrooms (a total of 55 children) in two geographical locations. An equal proportion of children came from each location. Parental permission was

obtained.

Behavioral Classification

Teachers rated children's social behavior on two instruments: Kohn's Social Competence Scale (KCS) (Kohn, Parnes, and Rosman 1979) and Hahnemann Preschool Behavior Rating Scale (HPBS) (Spivack and Shure, 1974). KCS consists of 64 items which load on two factors: Interest/participation and cooperation/compliance. HPBS consists of seven items which load on three factors: emotionality, impatience, and aggression. Children were rank-ordered in terms of scores. Those children who ranked highest on both factors of the KCS and "average" on aggression and impatience on the HPBS were classified as the "most" competent. Those who ranked lowest on cooperation/compliance on the KCS and highest on all three factors of the HPBS were classified as the "least" competent. Only children whose scores deviated at least .75 s.d. from the mean were included in the sample. Test-retest (4 weeks) reliability of teachers' ratings ranged from .79 to .95 on KCS and .79 to .91 on HPBS.

Observation Procedures

A 20-item scheme, using categories adopted from Dodge (1981) and Sharp (1981), was developed and pilot-tested. Items includ 16 types of strategies to solve problems (e.g., threat, ask to play, share) and 4 general categories from non-problem-related behavior (e.g., sitting and watching others). See Table 1.

Using a focal child, time-sampling procedure, children were observed in 1-minute intervals in a predetermined random order each day (Altmann, 1974). A written record was made of behavior(s) exhibited, with whom (adult, boy, girl), type of problem (e.g., maintain materials) involved, if any, who

initiated the problem (focal child or other), responses to the behavior (positive, negative, no response), the termination of a sequence, and the beginning of any new sequences during the 1-minute interval. Exact agreement of categorization and sequence of behaviors was 81.5% on 4 hours of observation following two months of training and 86% on two hours midway through data collection.

General Procedures

Observers attended preschool regularly before data collection to accustom children to their presence. Four to six weeks after school started, teachers rated children's social behavior, and observations began. Children were observed during the 1-1 1/2 hours of in-classroom free play or semi structured activity time, 2 days/week for 11-12 weeks, yielding a total of 50 1-minute observations per child. All children in each classroom were observed, keeping observers, teachers, and children "blind" to the focal sample. Children's behavioral classification also remained unknown.

Results

Preliminary analyses of data revealed no significant sex main effect or sex x group interactions.

A 2 (group) x 2 (initiator/responder) x 3 (problem: space, materials, attention/interaction) x 3 (action: gain, maintain, regain) repeated measures ANOVA revealed no significant differences between groups' frequency of involvement, as initiators and/or responders, in problems with peers. See Table 2.

Despite no differences in frequency of materials-related problems, significant differences between groups were found in the type of strategies each used to gain materials. A 2 (group) x 2 (strategy: verbal, nonverbal)

ANOVA (F (1,26) = 7.66, $p < .01$) and postmortem tests revealed that the "least" competent group used significantly more ($p < .01$) nonverbal strategies (e.g., taking without asking) than the "most" competent group. See Table 3 for group means.

2 x 2 ANOVAs also indicated differences in strategies groups used to maintain peers' attention/interaction. "Most" competent children used significantly more ($p < .01$) verbal (e.g., ask to play), as opposed to nonverbal (e.g., hitting), strategies than "least" competent (F (1,26) = 4.61, $p < .05$). See Table 4 for group means. Furthermore, "least" competent children used significantly more ($p < .01$) antisocial (e.g., threatening, pushing), as opposed to prosocial (e.g., sharing) strategies than "most" competent (F (1,26) = 7.26, $p < .01$). See Table 5 for group means. Only marginal differences (F (1,26) = 3.77, $p < .06$) were found between groups in their strategies to gain attention/interaction ("least" "most" in usage of antisocial strategies).

No differences were found in the overall mean number of different strategies used by "most" and "least" competent children to gain materials, gain interaction, maintain interaction, regain interaction. See Table 6 for means.

Conclusions and Implications

The pattern of results indicates that differences between "most" and "least" competent preschoolers are not in the number of times the children encounter problems or the number of ways they attempt to solve problems. Instead, differences appear in the types of strategies they use to solve interpersonal problems. These results are supportive of Asher, Markell, and Hymel (1981) argument for a qualitative focus in social skills research.

That we find qualitative differences in peer interactions at this age similar to ones found linked with peer unpopularity and rejection in middle childhood (Coie, Dodge, and Coppotelli, 1982) suggests the need for early-life intervention to prevent continuation of maladaptive social skills. However, in light of the present findings, we may want to shift the focus of intervention from the present quantitative one to a qualitative focus. This suggestion is supported by the neglible behavioral improvement found with social-cognitive problem-solving training programs aimed at increasing children's number of strategies to solve interpersonal problems (Urbain and Kendall, 1980). Research on the efficacy of programs aimed at increasing verbal and prosocial strategies and decreasing nonverbal and antisocial strategies to mediate social competency is needed.

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TABLE 1

OBSERVATIONAL CODES

VERBAL STRATEGIES

POSITIVE, ASSERTIVE (PROSOCIAL)

- AO - ASK FOR OBJECT
- BI - BID FOR INFORMATION, QUESTION
- BA/I - STATEMENT/COMMENT USED AS A BID FOR ANOTHER'S ATTENTION/INTERACTION
- CMP - COMPLIMENT GIVEN TO ANOTHER
- DIR - DIRECTIVE, COMMAND TO ANOTHER
- TR(V)- NEGOTIATION OF A TRADE

NEGATIVE, ANTISOCIAL

- EX - EXCLUSION OF OTHER FROM PLAY
- NV - NEGATIVE VERBAL, DEROGATORY COMMENT TO ANOTHER
- TH - THREATENS NEGATIVE CONSEQUENCES IF OTHER DOESN'T COMPLY
- BR - USE OF MANIPULATIVE PAYOFF, A BRIBE TO GET OTHER'S COMPLIANCE

NONVERBAL STRATEGIES

POSITIVE, ASSERTIVE (PROSOCIAL)

- A - PHYSICAL DISPLAY OF AFFECTION
- SH - WILLINGLY GIVES SOMETHING TO ANOTHER, NOT A RESPONSE TO OTHER'S REQUEST
- TR - PHYSICAL TRADE WITHOUT VERBAL NEGOTIATION COMPONENT

NEGATIVE, ANTISOCIAL

- GAO - GRABS AT ANOTHER'S OBJECT WHILE IT IS IN THEIR POSSESSION
- GST - GRABS AN OBJECT AWAY FROM ANOTHER, SHOVES OR THROWS AN OBJECT AT/TO ANOTHER
- ASO - ATTEMPT TO ACCESS ANOTHER'S SPACE OR OBJECT WITHOUT VERBAL COMPONENT
- PA - PHYSICALLY AGGRESSIVE ACT TOWARD ANOTHER

NON PROBLEM-SOLVING BEHAVIOR

- PBS - PLAYING BY ONESELF
- SAW - WATCHING OTHERS, NOT ENGAGED IN AN ACTIVITY
- //P - PARALLEL PLAY
- CP - COOPERATIVE PLAY (USED TO ORGANIZE AND LABEL SEVERAL SEQUENCES OF SPECIFIC BEHAVIORAL INTERACTIONS)

TABLE 2

FREQUENCY OF CHILDREN'S INVOLVEMENT IN PROBLEMS

AS INITIATORS OR RESPONDERS

GROUP X ROLE	PROBLEM								
	SPACE			MATERIALS			ATTN/INTERACTION		
	G	M	R	G	M	R	G	M	R
"MOST"									
INITIATOR	9.93	.57	.29	9.36	.36	.28	30.93	20.28	12.21
RESPONDER	11.21	.71	.00	6.93	.28	.64	27.71	19.50	11.86
"LEAST"									
INITIATOR	8.14	.36	.14	12.57	.00	.43	28.43	16.78	11.00
RESPONDER	9.50	.57	.00	7.36	.21	.43	18.28	10.64	7.36

TABLE 3

TYPE OF STRATEGY USED TO GAIN MATERIALS

GROUP	STRATEGY	
	VERBAL	NONVERBAL
"MOST"	4.14	5.71
"LEAST"	2.86	9.93*

* "LEAST" > "MOST", $P < .01$. IN PARTICULAR "LEAST" GROUP'S USAGE OF ASO.

TABLE 4

TYPE OF STRATEGY USED TO MAINTAIN PEERS' ATTENTION/INTERACTION

GROUP	STRATEGY	
	VERBAL	NONVERBAL
"MOST"	19.57*	1.14
"LEAST"	13.64	2.93

* "MOST" > "LEAST", $p < .04$.

TABLE 5

TYPE OF STRATEGY USED TO MAINTAIN PEERS' ATTENTION/INTERACTION

GROUP	STRATEGY	
	PROSOCIAL	ANTISOCIAL
"MOST"	1.07	.43
"LEAST"	.64	2.64*

* "LEAST" > "MOST", $P < .01$.

TABLE 6

NUMBER OF DIFFERENT STRATEGIES USED BY GROUPS

TYPE OF PROBLEM	GROUPS	
	"MOST"	"LEAST"
SPACE		
GAIN	1.2	1.1
MAINTAIN	.14	.36
REGAIN	.14	.14
MATERIALS		
GAIN	3.4	3.6
MAINTAIN	.07	.00
REGAIN	.14	.14
ATTN/INTERACTION		
GAIN	4.6	4.1
MAINTAIN	3.4	3.5
REGAIN	3.4	3.1